

Amateur TRW radio Club WB6WPO

cross talk

A MONTHLY NEWS BULLETIN OF TRW AMATEUR RADIO CLUB

Sponsored by Systems Employee Association

Vol. VIII, No. 3

March 1974

TRW/ARC Sat/Sun Nets 10am/pm PDT

WAC
WAS
DXCC
FD'71
FD'73



Primary	7.280 MHz
Alternate	3.980 MHz
Simplex	147.510 MHz
Novice	7.140 MHz

March Meeting Reminder

Wednesday Noon

(Always the last Wednesday of Month)

Programme: S. California FM Repeaters
by Neil McKie, WA6KLA

Bldg/Room R2-1055 March 27th

TRW/ARC Shack #2 Goes Operational



Al Lee (W6KQI) and Mac McGrew (W6YCZ)

TRW/ARC SHACK #2 Now A REALITY

Effective 1300 PDT, Saturday, March 16th, amateur radio operations began at WB6WPO, Shack #2, located in the West Lobby of Bldg M1. Initial on-the-air checkout was conducted by Station Manager Mac McGrew, and club president Frank Halligan utilizing the new club 2 meter ICOM 230 rig.

All reports indicate that the station is getting out well and is able to break all local repeaters with ease. Simplex operations with the local noontime mobiles provides armchair copy, complete quieting and a pegged "S" meter. Club members already logged thru the new shack include: W6FQ, W6EKK, W6IZK, WA6RJF, and W6YCZ.

At the present, the only mode operational from Shack #2 is 2 Meter FM. A Ringo is in place high above M1 (in fact a mod kit has been purchased and will be installed shortly to provide an overall gain of 5.9 db) with some 125' of coax string to the lobby. A 75 meter dipole antenna is installed and available when low band equipment is installed later.

The installation of the second club shack was made possible thru the efforts of Al (W6KQI) and Mac (W6YCZ). See p. 2.

WB6WPO Shack #2 (Bldg M1) Operating rules

- o Any licensed member may sign for access keys from the M2 Lobby Receptionist
- o Entrance to Shack #2 is via the M1 West Hallway (don't touch the Emergency Exit Alarm Panic Bar...)
- o The ICOM 230 is kept locked in the desk until permanent installation takes place
- o A log book is provided to record all transmissions. Note: ONLY Station WB6WPO call identification letters are to be used.
- o Caution must be exercised to ensure that no one tries to exit the double doors that still lock the lobby area from the outside
- o Secure the shack and return keys when done

TRW/ARC SHACK #2 NOW A REALITY (Continued from p. 1)

Shack #2 began as an idea presented by Mac in the December 11th Executive Committee session. A committee of two, the other participant being Al, was formed by Past-Pres Paul Weisz to investigate the feasibility of such a proposal. Approvals were obtained to use the unused West Lobby of M1, and plans proceeded rapidly into reality with the installation of a desk, table, chairs, antennae and the ICOM 230. The second club station is the culmination of long range goal to provide operating facilities at the Space Park Site for club members not able to get to Shack #1 in Bldg 65 during the noon-hour. And with over a 100% growth in membership in the last few years, additional facilities are warranted as the thrust of the club moves toward a Radio Amateur Civil Emergency Service (RACES) support capability for the South Bay Area.

Ham Profile Mac McGrew (W6YCZ) is a long time member of TRW/ARC, and has participated in many club offices, including QSL Manager, and that of Activity Manager. And he now assumes the responsibility as Station Manager for Shack #2. Mac was born and raised in Lincoln, Nebraska, and in his early teens became interested in amateur radio. He received his first ticket at the age of 16, with the call of W9ULD. His first rig consisted of a 3 tube regenerative receiver, with a pair of 45's making up the TNT push-pull transmitter circuit. He says that he worked "most of the USA and some of the world" with that rig before he was 18, when he moved to California.

He spent World War II getting shot at (that's a story in itself!!), and acting as communications chief in the artillery. He participated in the Normandy "D" Day landing at Omaha Beach and later was in the First and Third Armies under General Patton. After the war he picked up his present call of W6YCZ.

Prior to joining TRW Systems, Mac was an R&D Tech on the Snark Missile and is Past-President of the Northrup Radio Club. At TRW, he works in the Metrology Laboratory, and has been with the company 11½ years. He presently holds a Commercial Radio Telephone License and the coveted Amateur EXTRA Class ticket. His amateur radio equipment inventory includes a Swan 270 w/linear and ICOM 230.

Ham Profile Al Lee (W6KQI) is a "charter" member of TRW/ARC going back to 1959 when the club was first formed. Al is the club Training Manager and states that he is "doing my little bit to perpetuate the hobby and try to help those who are willing to learn". Al had his first exposure to CW after joining the Army Air Corps in 1946. At Fort Monmouth he was taught code for 8 hours a day, 5 days per week for six months or until passing 30 WPM, whichever came first. After that, he spent a year in Nome, Alaska, as a radio operator on the 35 WPM Communication Net.

Al later attended National Schools in Los Angeles, and received both his ham and commercial tickets in 1951. His first rig was home brew with an 813 final, and screen grid modulation -- ugh!! He went mobile in 1956 with another home brew rig, and has been mobile ever since.

In 1967, Al was selected by the Associated Radio Amateurs of Long Beach as the amateur radio operator for the final voyage of the Queen Mary. So, in Southampton, England, Al was issued British call GB5QM, making Al the first American to be licensed to operate aboard a British vessel. What really concerned British officials was the fact that it was the first time in British Maritime History that a VFO was allowed to be used.

The President's Page

by F. X. Halligan, WB6GBC

AMSAT

First of all, I would like to once again extend my thanks and appreciation to Ed Arnn, WA3FVG/6, who was our guest speaker for the February Meeting. It was a most informative and interesting presentation on the OSCAR's. We also had an excellent turnout of 30 members and guests for that meeting, and I am sure Ed has renewed the interest of all in the Amateur Radio Satellite Program. The club has recently applied for membership in AMSAT, and it is hoped that during the course of 1974, the TRW/ARC Satellite Ops Technical Committee can be organized and WB6WPO will, too, be working the OSCAR's. Any one interested in participating in our club's satellite ground station project should contact Ed Arnn, or myself....there is still room for ground station technical experts!!

TRW/ARC NETS

For those of you who haven't heard the word, or can't find any TRW/ARC FMer's on Saturday mornings on 146.55, it is because "they" have all agreed to a new Simplex Freq of 147.51 MHz, since "55" was a heavily trafficked national call frequency. So 147.51 MHz is almost like our own private line, and many members without ICOM's have already crystallized up for our new Simplex Frequency.

Effective with this month's membership roster, three new columns of data have been added, respectively captioned "SSB" (LowBand Single Side Band), "2M" (two meters), and "CES" (Civil Emergency Service - RACES). Sue Kennedy has been good enough to enter the appropriate X's adjacent to each member's data line. If the roster doesn't accurately reflect your capability, please drop a note in the company mail to Sue Kennedy for corrections. The intent, of course, is to provide a convenient means for determining fellow member operating modes.

PARTICIPATION

We would once again like to extend our thanks and appreciation to Bill Dews (K6AWO) for picking up the Chairman-in-Charge task for Field Day '74 from Paul Weisz (K6YQ), who will be on company business in Virginia for an extended period. Bill is already pretty well organized for Field Day this year, but he advises me that there are a few "choice" job assignments still available for the eager... so, don't delay, call Bill today!!

As you can see on our current revised organization chart, just about all of the proscribed appointive offices are now filled, for which we want to thank all of those who are participating and extend our invitation to those of you who would like to become more involved in club activities to consider one of the following positions (not just a "job"!!): Publicity Chairman (to handle club activity notices and publicity releases), CrossTalk Editor (although the job is beginning to grow on me, I feel it is unfair for me to have all the fun; another choice for the interested is that of Associate Editor), and we could still use help in the folding, stapling, and stamping department for CrossTalk Circulation.

SHACK #2

This issue of CrossTalk introduces all members to Shack #2 (Bldg M1). It is there for the benefit of all members. I am sure those of us on the Space Park Site will appreciate its convenient location, and will be looking forward to the addition of a low band capability in the future.

CUL,
Frank

Editor's Page

by F. X. Halligan, WB6GBC

OSCAR/AMSAT Bibliography

Thanks to Ed Arnn, WA3FVG/6, on page 9 of this issue, is a Table of QST articles related to OSCAR/AMSAT for those that may be interested in obtaining more background on the amateur satellite project.

Ray Meyer's Page

Starting with this issue of CrossTalk, we are fortunate enough to have Ray Meyers, W6MLZ, permission to re-publish selected articles from his Saturday Evening Herald-Examiner column "Ham on Air". Ray is a well known olde-time story telling ham radio operator whose columns we are sure you will find of interest. Long timers with TRW/ARC will recall many of his hair-raising tales of his experiences with the first Nautilus.

Magazine Reviews

We have always felt that there generally not enough hours in the day to read all the many technical magazines that are available to the radio amateur. In this issue (and I hope in future issues) we are providing a review of ham magazine articles that we feel would be of interest to the homebrewer, or of general interest to TRW/ARC members.

However, since my hours are also limited, I would be grateful to any club member who would feel motivated enough to continue these magazine reviews and submit them monthly to the CrossTalk Editor for publication.

Technical Articles Solicited

The CrossTalk needs your contributions. Technical and informative articles are solicited for future issues. Have you got a subject that would be of general interest to be presented at a regular monthly meeting?? If so, get in touch with the Programme Chairman (than's Frank Cartier), who can be reached by calling X53446) so that you can be scheduled. If you have any suggestions for future programs, please contact Frank.

Coming CrossTalk Article

Your editor will have a first-hand article on the Heathkit HW-202 2-Meter Transceiver just as soon as he takes receipt on his recent order, and can get it assembled into some semblance of operating order. For those of you who may ask "but why a Heathkit?", my reply consists of three points:

1. I can look at it and say it is an American made product
2. I can look at it with pride and say I built it myself
3. I can look at it and say.....it doesn't look like I built it myself!!

FM Rig Performance

PARC (Palisades Amateur Radio Club) reports in their February '74 Bulletin on the performance of FM rigs checked out during their December Tune-In. Their data indicates that the ICOM 230 were "among the best imported radios they saw". For TRW/ARC members interested in further data, I'll be glad to pass along a copy of their results (takes up a page).

Magazine Reviews

By F. X. Halligan

Note: The magazines reviewed here are purchased by TRW/ARC and are available on the "club" shelves in the Technical Information Center Library (Bldg S) as a service to all who are interested in amateur radio. Except for the current issues, the magazines may be checked out thru the library central desk.

CQ (Feb '74)

- o Zero Bias (by Editor Dick Ross, K2MGA, p.5) highlights a possible new FCC amateur radio licensing scheme running the gamut from a new Communicator Class (only Novice theory required), with the General CW reduced to 10 WPM, on up to separate exams/Classes for EXTRA-phone and EXTRA-code.
- o Low Profile Quad (p.24) gives construction details on a "cubical" 20 meter quad that is dimensioned at 9'h x 18'l, still not exactly a mini-antenna.
- o Ten-Tec 315 Technical Review (p.35) gives all the inside dope on performance of this energy saving SSB/CW amateur communications receiver (valued \$245).
- o OSCAR News (p.41) gives a good run down on OSCAR 6 orbits and the technical capabilities of the upcoming AMSAT-OSCAR 7.
- o Slow Scan TV (p.44) offers some insights into design of emitter followers.

Ham Radio (March '74)

- o Controlled Access to Open Repeaters (p.22) describes 15 minute guard circuitry for repeaters to reduce unwanted interference. Utilizes IC's.
- o Six Meter Frequency Synthesizer (p.26) gives complete construction details to cover the 50-54 MHz band in 1 KHz steps. The output frequency is from 8.33 MHz to 9 MHz; looks like the most promising of homebrew articles.
- o Vertical Antenna Characteristics (p.34) discusses matching networks and losses, and band width of vertical antennas of various heights (this is the first of a series of related articles).
- o Lowpass Filters (p.38) describes elliptic function filter designs for 160 thru 10 meters that are used with solid-state amplifiers.

QST (March '74)

- o A complete 2M FM Transceiver (p.21) is the concluding article on a homebrew compact 1 watt rig. The author lists other references for the homebrew enthusiast. (Commentary: I wonder how many hams really have the guts to attempt such a project?)
- o Other articles include The Constant-Impedance Trap Vertical (p.29), Making Your Own Satellite Tracking Nomograph (p.40), a technical review of the Genave GTX-200 and GTX-2 FM Transceivers (p.50), and an article on QST's conversion to computer filekeeping (p.53).....a re-validation of that programmer's hoary axiom: GIGO (Garbage-In/Garbage-Out).
- o I'll assume that regular subscribers to QST will already have noted that WB6WPO is listed (p.99) as a new member to DXCC (both Phone and CW, thanks to the efforts of Roger Trapp (K6SSN), our Awards Chairman); and that LA SCM Gene Violino (W6INH) invariably has a kindly word (p.144) about the "TRW RC".

TREASURER'S REPORT

by Susan Kennedy, WN6TXV

Balance on hand February 12, 1974 \$415.58

Receipts

Dues (renewals)	\$24.00
Dues (new)	6.00
General Class/books	20.50
C. U. Dividend	3.97
QSL Orders	5.75
ARRL Membership	2.00
Crystal Order	458.80
SEA Allotment	106.25
	<u>\$627.27</u>

Expenses

DoorPrizes-ARRL (Dec,Jan)	\$ 16.00
TRW ECU (Icom230)	20.00
Rig Insurance	50.00
Class Mtls/Ringo Ant.	52.05
Crystal Order	458.80
AMSAT Dues	5.00
QSL Orders (incl prizes)	9.00
Stamps (CrossTalk)	10.00
	<u>\$620.85</u>

Balance on hand March 14, 1974 \$422.00

Treasurer's Notice: Attention, especially those of you whose membership has expired. The first quarter of the year ends on March 31st. The SEA Allotment (which is used to finance such things as Field Day, including food and liquid refreshments, and new equipment like the ICOM 230) is based on the number of current, payed up, full members as of the end of the quarter. If you do not renew your dues promptly the treasury may be somewhat smaller because you will not be counted in the tally of current full members....please renew your membership promptly!!!

Membership Applications

Included elsewhere in this issue of CrossTalk is a New Member Application Form. If you have a friend (or enemy) that you think may be interested in joining a growing and successful local Amateur Radio Club, please pass the application on. If you need additional copies of the CrossTalk or Application, don't hesitate, contact Frank Mullen (WA6RJF), TRW/ARC Membership Chairman today!

SECRETARY'S REPORT

By Joel R. Wineman, WA6WRB

The Expanded Executive Committee Meeting convened at 1204 on March 14, 1974, in E1/3068. Present were: Dews, Freeman, Gleed, Halligan, Heydon, Kennedy, Lee, McGrew, Mullen, Newhoffer, Thornley, and Wineman.

Old Business

1. McGrew reported that the M1 Shack has a desk, table, and chairs. The coaxial cable to the roof will be installed this Saturday (3/16). It is hoped to get the ICOM on-the-air for the Saturday Net.
2. Halligan advised that the Executive Board voted on raising the Associate Member dues to \$3.00 (to cover increased postage expenses). The matter will be put to a vote of the membership at the March meeting.

New Business

1. Halligan told of the need for a Bldg 65 Shack Party to clean up and repair the area. Freeman has the ACTION to develop a plan of refurbishing same.
2. Freeman informed the committee that Nelson Hayes will service the club's Swan equipment in the next few weeks.
3. Dews discussed Field Day plans:-
 - a. Heydon will write the Naval Fuel Depot to request use of the facility.
 - b. Newhoffer will write TRW Insurance to request coverage for the activity.
 - c. Freeman moved, Wineman seconded, an allocation of \$125.00 from the club Treasury for Field Day 1974 expenses. The motion passed.
 - d. Dews will gather past year's log books for reference materials.
 - e. Dews has the action to setup a Field Day Working Group meeting soon.
4. Kennedy brought up the idea of selling TRW/ARC license plate frames. Discussion was tabled until more information is obtained.
5. Gleed reported on the LA Radio Council Meeting.

Meeting was adjourned at 1301.

TRAINING PROGRAM CHANGES

by Al Lee, W6KQI

To reduce the breaking up of car pools and since all the EXTRA class students are TRW employees, it was decided to hold the EXTRA class code sessions at noon on Mondays and Tuesdays. If anyone is interested in brushing up on their code, please drop in. Everyone is welcome providing you can copy 16-18 WPM, or better. The theory sessions continue to be held on Thursday evenings at 5:30 and are becoming quite technical and are well presented by Ed Arnn, WA3FVG/6. All sessions are held in S/2470.

OSCAR/AMSAT QST Bibliography by Ed Arnn, WA3FVG/6

<u>ISSUE</u>	<u>ARTICLE</u>	<u>ISSUE</u>	<u>ARTICLE</u>
May '61 p.45	Ground support for project OSCAR Discusses Doppler terminology	Jun '64 p.16	OSCAR III: Technical Description Details of system
July '61 p.59	Project OSCAR measurements and tracking Rpt format, Polar orbital "Computer", Doppler meas. technique	Feb. '65 p.11	"Quickie" Orbital Predictions for OSCAR III Practical orbital mechanics
Feb. '61 p.55	Project OSCAR Background	Mar. '65 p.56	OSCAR III Orbital Predictions and How To Use Them - Practical techniques valid for OSCAR VI
Feb. '61 p.56	Project OSCAR Future plans, good general interest	May '65 p.56	OSCAR III Orbits the Earth Another W6SAI report
Feb. '62 p.19	Communications for Project OSCAR	Feb. '66 p.81	World Above 50 MHz OSCAR IV launch report
Feb. '62 p.21	The OSCAR Satellite Satellite and launch vehicle (OSCAR I)	Jul '69 p.58	Australis-OSCAR V OSCAR V technical description
Feb. '62 p.11	Sixty Years of Amateur Communications Exciting article about OSCAR launch by W6SAL	Apr '70 p.60	Australis-OSCAR V Launch report
Mar. '62 p.23	Making Your Own Orbital Predictions From Doppler Measurements Good introduction to orbital mechanics.	Oct. '70 p.54	Australis-OSCAR V Ionospheric Propagation Results
May '62 p.15	Keeping Track of OSCAR Simple techniques	Dec. '72 p.58	OSCAR News OSCAR VI launch report
Sept. '62 p.46	OSCAR I: A Summary Flight test report by W6SAL-excellent	Jul '73 p.66	The Sixth Amateur Satellite, Part I
Apr. '63 p.53	OSCAR II: A Summation Flight test report	Aug. '73 p.69	The Sixth Amateur Satellite Technical detail from Jan King
Feb. '63 p.42	OSCAR III: VHF Translator Satellite Preliminary technical description, W6SAL	Feb. '74 p.56	OSCAR VII and Its Capability

Reference Articles (Co Ax Feeders and Stubs; Ohmmeter Polarity)

Thanks to Fred Reed (W6UMC), he has passed along a 73 Magazine article that he feels is as pertinent now as it was in April 1961, when it was published.

Measuring Co Ax Feeders and Stubs

Bill Roberts W9HOV
House of Antennas
1153 East 82nd Street
Chicago 19, Illinois

RECENTLY a brainstorm sent me into intimate consultation with a full set of handbooks and a slide-rule. This resulted mostly in several pages of calculations and a desire to do something else less mathematical. The antenna never did emerge from the confusion of figures, but an interesting chart did.

This chart shows the length of a half wave in free space, the length of a half wave of co-ax such as RG8/U, RG11/U, RG58U, or any other co-ax having a velocity factor of 0.66, the length of a quarter wave of co-ax (half the former, of course), and a multiple of half waves that will give you an all-band co-ax feeder.

Now let us take a hypothetical case and see what the chart will do for us. A half wave feeder for 28,600 kc would be 11.35 feet, or

11 feet 4 inches. A quarter wave stub would be 5.68 feet (5'-8"). It is interesting to note that a line 45'-7" would be $4\frac{1}{2}$ waves on 10, $3\frac{1}{2}$ waves on 15, 2 half waves on 20 and one half on 7 mc.

In multi-band antennas it is often advantageous to have a feed line that is $\frac{1}{2}$ wave long. If you can choose a feedline that is $\frac{1}{2}$ wave long on each band you may solve many problems. As you look down the chart you will see that there is a length around 45-46 feet that works out to be a half wave multiple on all bands. The CW operator would be more interested in the 46 foot length, the phone man around 45.4' or so.

This chart is for co-ax, not for open wire lines or twin-lead.

... W9HOV

	28000	28100	28200	28300	28400	28500	28600	28700	28800	28900	29000	29100	29200	29300	29400
$\frac{1}{2}$ Wave	17.57	17.51	17.45	17.39	17.32	17.26	17.20	17.14	17.08	17.02	16.96	16.90	16.84	16.78	16.72
$\frac{1}{4}$ Wave Coax	11.60	11.56	11.52	11.48	11.43	11.39	11.35	11.31	11.27	11.23	11.19	11.15	11.11	11.07	11.03
$\frac{1}{8}$ Wave Coax	5.80	5.78	5.76	5.74	5.72	5.70	5.68	5.66	5.64	5.62	5.59	5.57	5.55	5.53	5.51
$4\frac{1}{2}$ Waves ...	46.40	46.24	46.08	45.92	45.72	45.56	45.40	45.24	45.08	44.92	44.76	44.60	44.44	44.28	44.12
	21000	21075	21150	21225	21300	21375	21450								
$\frac{1}{2}$ Wave	23.42	23.35	23.28	23.21	23.14	23.07	22.99								
$\frac{1}{4}$ Wave Coax	13.45	13.41	13.35	13.30	13.25	13.19	13.14								
$\frac{1}{8}$ Wave Coax	7.73	7.70	7.68	7.65	7.62	7.60	7.57								
$3\frac{1}{2}$ Waves ...	46.40	46.24	46.08	45.92	45.72	45.56	45.40								
	14000	14050	14100	14150	14200	14250	14300	14350							
$\frac{1}{2}$ Wave	35.14	35.02	34.90	34.77	34.65	34.53	34.40	34.28							
$\frac{1}{4}$ Wave Coax	23.19	23.11	23.03	22.95	22.87	22.79	22.70	22.62							
$\frac{1}{8}$ Wave Coax	11.60	11.56	11.52	11.47	11.43	11.39	11.35	11.31							
$2\frac{1}{2}$ Wave ...	46.40	46.24	46.08	45.92	45.72	45.56	45.40	45.24							
	7000	7025	7050	7075	7100	7125	7150	7175	7200	7225	7250	7275	7300	7325	7350
$\frac{1}{2}$ Wave	70.28	70.04	69.80	69.54	69.30	69.04	68.80	68.56	68.33	68.08	67.84	67.60	67.36	67.12	66.88
$\frac{1}{4}$ Wave Coax	46.38	46.23	46.06	45.92	45.72	45.56	45.40	45.24	45.08	44.92	44.76	44.60	44.44	44.28	44.12
$\frac{1}{8}$ Wave Coax	23.19	23.11	23.03	22.95	22.87	22.79	22.70	22.62	22.55	22.46	22.38	22.30	22.22	22.14	22.06

Ohmmeter Polarity Test

Most multimeters are wired so that the black lead is positive and the red lead negative when measuring ohms. But not all are wired that way. When testing diodes and electrolytic capacitors, it helps to know for certain which way particular meter you grab is wired. If you don't happen to have a second meter to test the polarity, you can use a common potato to determine which lead is plus. The plus lead area turns bluish after a bit if you stick both leads into the spud.

A much better method is to simply use the ohmmeter to charge up any capacitor, 0.25 mfd or larger, then disconnect the capacitor,

switch to the dc voltage range, and reconnect the capacitor and see which way the meter needle kicks.

This same charged capacitor is frequently used to advantage to measure dc voltages in extremely high impedance circuits. The capacitor is connected to the circuit (through an isolating resistor if needed) and allowed to build up to a full charge. Then a VTVM or dc Scope is connected to the capacitor and the reading quickly made before the charge leaks off. Naturally a good capacitor is essential, such as a mylar or polystyrene type.

... K6EAW

Ham on Air

Los Angeles Herald-Examiner, Saturday, February 2, 1974

Handicapped Find Benefits

By RAY MEYERS-W6MLZ
Retired U.S. Treasury Department accountant-auditor Harold A. Ball, of San Diego, finding himself handicapped physically, is having a ball on the air as an amateur radio operator with the call WA6HBQ. His wife Marian Ruth is elated over the many contacts her hubby has on the air and realizes that amateur radio, besides being of a public service, has untold benefits for the handicapped.

Ball, an amputee, will celebrate his 70th birthday next Tuesday. He was reared in Jerome, Ariz. at one time a rip-roaring mining town. He graduated from Jerome High School and then went on to the University of Arizona at Tucson, where he majored in mathematics and physics, earning a degree in education.

Hal, as he is known on the air, informs me that Jerome is no longer the boom days town but instead is just a ghost town in Arizona. He, like many former residents, have fond memories of Jerome dating back to the early part of the century.

Taking a post with the Treasury Department, Ball worked for that division of our government from 1935 to 1964. Most of his time was spent in Washington, D.C., but now and then he was called upon to take on a project outside the Capitol.

For instance, in 1953 he was detailed to attend conferences in France and Lebanon, representing the Treasury Department by working with various disbursing officers stationed in those countries.

One enjoyable assignment not too far from headquarters was when he was detailed to serve as Department liaison at the National War College during the period 1947-48. At that time the College was under direction of Admiral Hill, commandant.

One task he had been given was auditing the accounts of the U.S. treasury whenever there was a change in that of-

fice. Mrs. Ivy, Baker Priest, current California treasurer, was one who's books were audited by Hal, who found everything in order when Mrs. Priest left her important post in Washington.

Prior to his retirement Ball was awarded the meritorious service award by the Secretary of the Treasury, the highest honor paid to a Civilian employee by that cabinet officer.

Harold and Marian Hall have two daughters and seven grandchildren. Daughter Virginia Herrick, the oldest of the pair, lives in San Diego with her three children. The other daughter, Marian Langhorn, lives in Atlanta, GA.

It was not until 1971 that Hal became a licensed amateur. He states that with the help from Grady Howard-WB6FHI, and William Walsh-WB6GYB, both of whom hold advanced class licenses, he was able to study the code and theory which enabled him to pass his examination.

Active on the International Handicapped Net of 14287, on the air from 8 to 10 A.M. Monday to Friday, Hal, who holds Certificat No. 999, believes that "IHN" is the finest social net in operation anywhere in the world. A recent report from Joe Ozzie-WA6GBD, senior net control, a Navy Veteran who lost his sight in action during WW-II, informs me that during 1973 the Net had 16,845 members check in during regular net session. This averages over 1407 a month. During Net operations it is not unusual for some station other than a Net member to break in with an urgent, or priority message concerning some type of emergency situation.

— . . . —

Ham on Air

Los Angeles Herald-Examiner, Saturday, February 23, 1974

Code Key to Wedding

By RAY MEYERS-W6MLZ

A man and wife team of radio amateurs are Russell and Linda Pettit of Portola, up in the mountains of Plumas County. It was my pleasure to meet the couple during the recent SAROC convention in Las Vegas.

Russell has the call of WB6ZUP while Linda uses WB6ZSE, and both hold the coveted advance class license permitting them to operate on all amateur frequencies assigned by the Federal Communications Commission.

In chatting with Linda, I learned quite a bit about this talented lady. She was working as graphic artist for a television station in Salinas when she first became interested in amateur radio. Attending Monterey Peninsula College at night, she took a year of electronics. This proved most helpful in passing the advanced class examinations and she stated that this experience gave her the courage to build her own transceiver.

Her main interest at the time was use of code. It was through this method of communication that she met her husband. He was a brakeman-conductor for the Western Pacific Railroad at the time. Another of her contacts was Samuel F.B. Morse, III-W6FZZ, who occasionally would send Morse code to her, thus creating an interest in a second method of communicating by key. Young Morse is the grandson of the famous inventor of the

telegraph which has changed our way of life.

Linda's interest in Morse code got her acquainted with Joe Baker-W7IEH, of Tucson, Arizona. This old-timer, slightly older than 80, was most happy to hold regular schedules with her and as a result she is one of the regulars on the Western Amateur Radio Morse Code Network which meets daily on 7055 kHz at 8:30 a.m. and 3535 kHz at 7 p.m. daily. Too, there is another net which meets at 2:30 p.m. local time on 14075 kHz Mondays through Fridays for contacts with the East Coast. Linda takes part in practically all of these schedules.

There are a number of interesting people on the Morse nets, according to Linda. To mention a few, she cites Beatrice Eld-K4JYQ, of Hopewell, Virginia, the only other lady brass pounder on the net, and a young man of 23 named Chris Watson-WB6TJS, of Sacramento, California.

Chris, although blind, taught himself both the Continental and Morse codes well enough to be able to hold his own with net members. He also holds the advanced class license.

It is expected that there will be quite a gathering at the annual luncheon of the Morse Telegraph Club which will be held at Brotherton's Family Restaurant in Pasadena April 27, according to a brief note received from Doc Hess-W6CK, president of the club. There should be quite a gathering after scanning the list of known Morse net members furnished by Linda.